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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/516,739

12/06/2004

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EXAMINER

SALVATORE, LYNDIA

ART UNIT

PAPER NUMBER

1794

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/516,739	<b>Applicant(s)</b> TOKUDA ET AL.	
	<b>Examiner</b> Lynda M. Salvatore	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 May 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-8 and 10-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-8 and 10-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

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## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's amendment and accompanying remarks filed 5/06/08 have been fully considered and entered. Claims 1-2, 4-8 and 10-12 have been amended and claims 3, 9 and 13-14 have been canceled as requested. Applicant's amendments are not found patently distinguishable over the prior art made of record and Applicant's arguments are not found persuasive of patentability for reasons set forth herein below. In addition, Applicant's amendment necessitated the ground of rejection set forth herein below.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 1 recites the broad recitation of

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“comprising a lactic acid polymer”, and the claim also recites “uses only an L-lactic acid unit, a D-lactic acid unit, or both as polymerization materials” which is the narrower statement of the range/limitation.

In addition, claim 1 is further indefinite because Applicant does not recite a polymerization product or composition. Applicant merely recites a lactic acid polymer having a ratio of L and D lactic acid units.

***Claim Rejections - 35 USC § 103***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1-2, 4, 7-8 and 10 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Bastioli et al., US 6,841,597 in view of Knight et al., US 6,365,088.

Applicant amended claim 1 to recite “wherein the electret filter medium uses only an L-lactic acid unit, a D-lactic acid unit, or both, as polymerization materials” and argues that the prior art of Bastioli et al., teach a mixture comprising at most 30% by weight polylactic acid and at least 40-70% by weight of polyhydroxy acid or aliphatic polyester. As such, Applicant argues that the composition of Bastioli et al., is entirely different from the instantly claimed composition. This argument is not found persuasive. In response, it is respectfully pointed out that Applicant's open claim language of comprising does not preclude the addition of other constituents. It is the position of the Examiner that the teaching of Bastioli et al., to a mixture comprising up to 30% of polylactic acid meets the limitation of a lactide content of at most 15% based on the medium.

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With regard to claim 2, Applicant argues that the prior art of Bastioli et al., teach employing at most 30% polylactic acid whereas instant claim 2 recites the phrase “consisting essentially of” of the lactic acid polymer. This argument is not found persuasive. In response, “A consisting essentially of” claim occupies a middle ground between closed claims that are written in a consisting of format and fully open claims that are drafted in a comprising’ format.” PPG Industries v. Guardian Industries, 156 F.3d 1351, 1354, 48 USPQ2d 1351, 1353-54 (Fed. Cir.1998). See also Atlas Powder v. E.I. duPont de Nemours & Co., 750 F.2d 1569, 224 USPQ 409 (Fed. Cir. 1984); In re Janakirama-Rao, 317 F.2d 951, 137 USPQ 893 (CCPA 1963); Water Technologies Corp. vs. Calco, Ltd., 850 F.2d 660, 7 USPQ2d 1097 (Fed. Cir. 1988). For the purposes of searching for and applying prior art under 35 U.S.C. 102 and 103, absent a clear indication in the specification or claims of what the basic and novel characteristics actually are, “consisting essentially of” will be construed as equivalent to “comprising.” See, e.g., PPG, 156 F.3d at 1355, 48 USPQ2d at 1355. Additionally, the burden of establishing that any composition components of the prior art references applied by the Examiner is excluded from the claims as argues appropriately rests the Appellants. *In re Herz*, 190 USPQ 461 (1976) and *Ex parte Hoffman*, 12 USPQ 2d 1061 (1989). Applicant bares the burden of proof in establishing that non-recited components materially change the characteristics of Applicant’s invention *In re DeLajarte* 143 USPQ 256

As such, the Examiner maintains that it is expected that the claimed endotherm, crystal fusion and charge density properties would be exhibited once the non-woven fabric Bastioli et al., in view of Knight et al is provided.

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The patent issued to Bastioli et al., teach a biodegradable polyester mixture comprising 2-30% of a polymer of polylactic acid (abstract). Said polymer of polylactic acid comprises at least 75% L or D lactic acid or there combinations (column 7, claim 1). Said biodegradable polyester mixture is suitable to form fibers for the manufacture of non-woven fabrics (column 5, 50-60). Bastioli et al., does not specifically teach forming an electret filter medium, however, the patent issued to Knight et al., teach an electret treatment for non-woven webs (title and abstract). Knight et al., teach employing a corona discharge method (abstract). Knight et al., specifically teach providing filtration materials (column 1, 15-25).

Therefore, motivated by the desire to provide a biodegradable electret filter medium, it would have been obvious to one having ordinary skill in the art at the time the invention was made to treat the non-woven fabric formed with the biodegradable polyester taught by Bastioli et al., with the corona discharge method taught by Knight et al.

The combination of prior art fails to teach the claimed endotherm, crystal fusion and charge density properties, however, it is reasonable to presume that said properties are inherent to the non-woven fabric provided by the combination of Bastioli et al., in view of Knight et al. Support for said presumption is found in the use of like materials such as L and D lactic acid polymers in the claimed amounts/ratios and the use of like processes such as forming a non-woven fabric, which would result in the claimed endotherm, crystal fusion and charge density properties.

5. Claims 5 and 11 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Bastioli et al., US 6,841,597 in view of Knight et al., US 6,365,088 as applied to claims 1 and 7 and further in view of Raetzsuch et al., US 6,537,473.

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Applicant argues that the addition of the nucleating agent significantly improves the electret property of the electret filter medium and the combination of prior art fails to teach this feature. This argument is not found persuasive. In response, Applicant is not claiming any particular type of improved electret property either empirically or quantitatively. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

The combination of Bastioli et al., in view of Knight et al., fail to teach adding nucleating agents to the poly-lactic acid polymer composition, however, it is commonly known in the art that nucleating agents are added to polymers to increase the crystallization rate and the overall percent crystallinity of the polymer (<http://www.specialchem4polymers.com/tc/nucleators/>). To that end, the patent issued to Raetzsuch et al., teach polymer filaments having .05 to 1% of a nucleating agent (column 5, 45-55).

Therefore, motivated by the desire to increase the crystallization rate and the overall percent crystallinity of the polymer, it would have been obvious to one having ordinary skill in the art at the time the invention was made to add a sufficient amount of nucleating agent to the poly(DL-lactic) acid polymer of Bastioli et al., in view of Knight et al., as taught by Raetzsuch et al.

With regard to phrase “consisting essentially of”, the burden of establishing that any composition components of the prior art references applied by the Examiner is excluded from the claims as argues appropriately rests the Appellants. *In re Herz*, 190 USPQ 461 (1976) and *Ex parte Hoffman*, 12 USPQ 2d 1061 (1989). Applicant bares the burden of proof in establishing

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that non-recited components materially change the characteristics of Applicant's invention *In re DeLajarte* 143 USPQ 256

6. Claims 6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bastioli et al., US 6,841,597 in view of Knight et al., US 6,365,088 as applied to claims 1 and 7 and further in view of Angadjivand et al., US 6,375,886 and Gruber et al., US 5,142,023 .

The combination of prior art fails to teach the specific process limitations set forth, however, the patent issued to Angadjivand et al., teach making a non-woven electret web by cooling the web in the presence of an electric field (column 13, 30-45). Angadjivand et al., teach that such cooling traps the charge (column 13, 30-45). Suitable electric fields include the claimed corona current (column 10, 1-10).

Therefore, motivated by the desire to form an electret non-woven with trapped charge, it would have been obvious to one having ordinary skill in the art to treat the non-woven web provided by the combination of Bastioli et al., in view of Knight et al., with the electric charge methods taught by Angadjivand et al.

Gruber et al., teach purifying lactide polymers with distillation (title and column 14, 50-60). Specifically, Gruber et al., teach employing vapor distillation to remove low molecular weight oligomers which may be present (column 6, 5-26). Gruber et al., further teach that an object of the invention is to provide biodegradable lactide polymers.

Therefore, motivated by the desire to remove the impurities within the lactide polymer to produce a biodegradable polymer, it would have been obvious to one having ordinary skill in the art at the time the invention was made to distill the lactide polymers of Bastioli et al., in view of Knight et al., as taught by Gruber et al.



***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lynda M. Salvatore whose telephone number is 571-272-1482. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lynda Salvatore/  
Primary Examiner  
Art Unit 1794  
8/15/08